

## **II. REMARKS**

By the foregoing amendment, a substitute sequence listing, including a computer-readable form copy and an image form are submitted herewith. The specification is amended to insert the instant sequence listing in place of the previously filed sequence listing. The substitute sequence listing is amended by the addition of feature <223> that indicates that the disclosed sequence is chemically synthesized, as suggested in the sequence listing error report. The applicants also enclose herewith a statement pursuant to 37 C.F.R. § 1.821(f) that the content of the image and computer readable form are the same and do not contain new matter.

Respectfully submitted,  
PILLSBURY WINTHROP SHAW PITTMAN LLP

/ thomas a cawley jr /

---

Thomas A. Cawley, Jr., Ph.D.  
Registration No. 40944  
Telephone: (703) 770.7944

May 10, 2007  
CR/LTP  
P.O. Box 10500  
McLean, VA 22102  
(703) 905-2000



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/009,347

06/26/2002

Leonard C.W. Seymour

P 0284085

3808

909

7599

04/10/2007

PILLSBURY WINTHROP SHAW PITTMAN, LLP

P.O. BOX 10590

MCLEAN, VA 22102

EXAMINER

KETTER, JAMES S

ART UNIT

PAPER NUMBER

1636

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

30 DAYS

04/10/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

RECEIVED

PILLSBURY WINTHROP SHAW PITTMAN

APR 11 2007

41322 284085  
ATTY: [initials]  
DUE: [initials]  
EXT BY: [initials] 4/11



## UNITED STATES DEPARTMENT OF COMMERCE

## U.S. Patent and Trademark Office

Address COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
---------------------------------	-------------	---	---------------------

EXAMINER
----------

ART UNIT	PAPER
----------	-------

20070329

DATE MAILED:

**Please find below and/or attached an Office communication concerning this application or proceeding.**

## Commissioner for Patents

The communication filed on 12 January 2007 is non-responsive to the Office communication mailed 12 October 2006 for the reason(s) set forth on the attached Notice to Comply With the Sequence Rules or CRF Diskette Problem Report.

Since the above mentioned reply appears to be bona fide, applicant is given a TIME PERIOD of ONE (1) MONTH or THIRTY DAYS from the mailing date of this notice, which ever is longer, within which to supply the omission or correction in order to avoid abandonment. EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER C.F.R. 1.136(a).

The addresses below are effective 5 June 2004. Please direct all replies to the United States Patent and Trademark Office via one (1) of the following:

1. Electronically submitted through EFS-Bio (<<http://www.uspto.gov/efb/efs/downloads/documents.htm>>, EFS Submission User Manual - ePABE)

2. Mailed to  
Mail Stop Sequence  
Commissioner for Patents  
P.O. Box 22313 1450  
Alexandria, VA 22313 1450

3. Hand Carry, Federal Express, United Parcel Service or other delivery service to:  
U.S. Patent and Trademark Office  
Mail Stop Sequence  
Customer Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Any inquiry concerning this communication should be directed to Examiner Kottet, Art Unit 1636, whose telephone number is (571) 272-0770.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-1600.

JAMES KOTTET  
PRIMARY EXAMINER

**Notice to Comply**Application No.  
10/009,347

Applicant(s)

SEYMOUR et al.

Examiner  
J. KetterArt Unit  
1636**NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS  
CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE  
DISCLOSURES**

Applicant must file the items indicated below within the time period set the Office action to which the Notice is attached to avoid abandonment under 35 U.S.C. § 133 (extensions of time may be obtained under the provisions of 37 CFR 1.130(a)).

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821 - 1.825 for the following reason(s).

- ☐ 1. This application clearly fails to comply with the requirements of 37 C.F.R. 1.821-1.825. Applicant's attention is directed to the final rulemaking notice published at 55 FR 18230 (May 1, 1990), and 1114 OG 29 (May 15, 1990). If the effective filing date is on or after July 1, 1998, see the final rulemaking notice published at 63 FR 29620 (June 1, 1998) and 1211 OG 82 (June 23, 1998).
- ☐ 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 C.F.R. 1.821(c).
- ☐ 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 C.F.R. 1.821(e).
- ☒ 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked-up "Raw Sequence Listing."
- ☐ 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A Substitute computer readable form must be submitted as required by 37 C.F.R. 1.825(d).
- ☐ 6. The paper copy of the "Sequence Listing" is not the same as the computer readable form of the "Sequence Listing" as required by 37 C.F.R. 1.821(e).
- ☐ 7. Other:

**Applicant Must Provide:**

- ☒ An initial or substitute computer readable form (CRF) copy of the "Sequence Listing".
- ☐ An initial or substitute paper copy of the "Sequence Listing", as well as an amendment specifically directing its entry into the application.
- ☒ A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).

For questions regarding compliance to these requirements, please contact:

For Rules Interpretation, call (703) 308-4216 or (703) 308-2923

For CRF Submission Help, call (703) 308-4212 or 308-2923

Patentin Software Program Support

Technical Assistance.....703-287-0200

To Purchase PatentIn Software.....703-306-2600

**PLEASE RETURN A COPY OF THIS NOTICE WITH YOUR REPLY**

STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING  
ERROR REPORT

EFS

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/009,347  
Source: EF/16  
Date Processed by STIC: 1/17/07

**THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.**

**PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:**

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-8221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER  
VERSION 4.4.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND  
TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chknote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail. Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom. Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/efc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05):  
U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/10/06

# Raw Sequence Listing Error Summary

ERROR DETECTED	SUGGESTED CORRECTION	SERIAL NUMBER: 10/009,347
ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE		
1. _____ Wrapped Nucleotides _____ Wrapped Amino Acids	The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."	
2. _____ Invalid Line Length	The rules require that a line not exceed 72 characters in length. This includes white spaces.	
3. _____ Misaligned Amino Numbering	The numbering under each 5 <sup>th</sup> amino acid is misaligned. Do not use tab codes between numbers, use space characters, instead.	
4. _____ Non-ASCII	The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.	
5. _____ Variable Length	Sequence(s) _____ contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.	
6. _____ PatentIn 2.0 "bug"	A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequence(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.	
7. _____ Skipped Sequences (OLD RULES)	Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence: (7) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) (8) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading) (11) SEQUENCE DESCRIPTION: SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) This sequence is intentionally skipped. Please also adjust the "(11) NUMBER OF SEQUENCES:" response to include the skipped sequences.	
8. _____ Skipped Sequences (NEW RULES)	Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence: <210> sequence id number <400> sequence id number 000	
9. _____ Use of n's or Xaa's (NEW RULES)	Use of n's and/or Xaa's have been detected in the Sequence Listing. Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present. In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.	
10. _____ Invalid <213> Response	Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence. (see item 11 below)	
11. _____ Use of <220>	Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown". Please explain source of genetic material in <220> to <223> section or use "chemically synthesized" as explanation. (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 25631-32), also Sec. 1.823 of Sequence Rules	
12. _____ PatentIn 2.0 "bug"	Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.	
13. _____ Misuse of n/Xaa	"n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid	



IFW16

RAW SEQUENCE LISTING                      DATE: 01/17/2007  
 PATENT APPLICATION: US/10/009,347              TIME: 12:24:01  
 Input Set : N:\efk\01\_17\_07\10009347\_efs\0204085s1.txt  
 Output Set: N:\CRF4\01172007\J009347.raw

3 <110> APPLICANT: Seymour, Leonard  
 4     Fisher, Kerry  
 5 <120> TITLE OF INVENTION: Modification of Biological Elements  
 8 <130> FILE REFERENCE: 041322-0284089  
 10 <140> CURRENT APPLICATION NUMBER: 10/009,347  
 11 <141> CURRENT FILING DATE: 2002-06-26  
 13 <150> PRIOR APPLICATION NUMBER: PCT/GB00/02239  
 14 <151> PRIOR FILING DATE: 2000-06-09  
 16 <150> PRIOR APPLICATION NUMBER: 99/3359.7  
 17 <151> PRIOR FILING DATE: 1999-06-09  
 19 <160> NUMBER OF SEQ ID NOS: 1  
 21 <170> SOFTWARE: PatentIn version 3.4  
 23 <210> SEQ ID NO: 1  
 24 <211> LENGTH: 4  
 25 <212> TYPE: PRT  
 26 <213> ORGANISM: Artificial  
 28 <220> FEATURES:  
 29 <223> OTHER INFORMATION: Artificial sequence  
 31 <400> SEQUENCE: 1  
 33 Gly Phe Leu Gly  
 34 1

Does Not Comply  
 Corrected Diskette Needed

insufficient  
 please give  
 source of genetic material  
 (see item 11 on Euro  
 summary  
 sheet)

RAW SEQUENCE LISTING ERROR SUMMARY      DATE: 01/17/2007  
PATENT APPLICATION: US/10/009,347      TIME: 12:24:02

Input Set : N:\efs\01\_17\_07\1009347\_efs\0204085s1.txt  
Output Set: N:\CRF4\01172007\J009347.raw

Invalid <211> Response:  
Use of "Artificial" only as "<211> Organism" response is incomplete,  
per 1.623(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:1



VERIFICATION SUMMARY

PATENT APPLICATION: US/10/009,347

DATE: 01/17/2007

TIME: 12:24:52

Input Set : N:\efs\01\_17\_07\10009347\_efs\0284085a1.txt

Output Set: N:\CRF4\01172007\10009347.raw